as many hours. This will not only be of use on great occasions, but in a common way its every-day value will be considerable. During the session of Parliament, for instance, on every question of interest her Majesty can learn the division, or the progress made in the debate, one moment after the House has divided, or any particular orator has risen to speak, or resumed his seat. Thus a more rapid communication between the Sovereign and her ministers for the time being will be established than has ever been known or thought of before. How desirable this is, seeing the immense accumulation of business which the course of events has produced in this great nation, need not be here discanted upon. We can scarcely anticipate that it will be undervalued by any one. Those who hold that second thoughts are best, will surely admit that the first cannot be dismissed too soon by correct information; and this scientific contrivance largely contributing to the rapid despatch of public affairs, must tend to the further aggrandizement and well-being of the country.—*From the Mirror.*

RAILWAY AXLES.—A series of highly interesting and important experiments was made at the Camden Town Station, on the London and Birmingham Railway, on Tuesday last, in the presence of Major-General Pasley, Mr. Bury, Mr. Gregory, and about thirty other engineers and gentlemen connected with railways, on the comparative strength of Youll's patent hollow axle, and the most approved solid ones now in use. The result was highly satisfactory, shewing an immense increase of strength in favour of the hollow ones. The mode or process of manufacturing also appears much more certain, and a uniformity of quality can be depended upon. The axles were submitted to a twisting strain of nearly twenty tons, and a weight was caused to descend upon the axle, the deflection in the hollow axle being far less than in the solid one, although the former was nearly 20 per cent. lighter. But the greatest improvement is in the ends or journals of the axle, which are also made hollow, but of no larger diameter than the solid ones, two or three blows with a heavy hammer being sufficient to break off the ends of the latter, and the hollow ones requiring thirty, forty, and even fifty blows to cause a fracture. When it is remembered that among other accidents, the dreadful one which took place last spring on the Paris and Versailles Railway was caused by the breaking of a solid axle, through the journal, too much importance cannot be attached to this fact. Many parties present went with a strong impression in favour of the solid axles, but at the conclusion of the experiments there was a universal admission of the superiority of the hollow ones. We are given to understand that these axles can be manufactured at a price not exceeding the solid, and there can be therefore no objection to their use on the score of economy.—*Railway Times.*

HEIGHT OF SOLDIERS.—In consequence of arguments respecting the height for soldiers, we have taken some pains, at various times, to ascertain the relative height of English, Irish, and Scotch recruits. As far as the line regiments are concerned, the Irish have a decided advantage in height. It must be, however, taken into account, that the guards, the marines, and the majority of the cavalry and artillery, are English, and the recruits for these are all of superior standard. It may then be doubted, if an equal number of tall men were deducted out of the total recruits raised in Ireland, whether any difference would exist. In weight, the English recruit has the advantage, the heights being equal. A regiment of the line that consists wholly of Englishmen will generally be found to average shorter than either the Irish, Scotch, or the mixed corps.—*Naval and Military Gazette.*

ZEUXIS AND PARRHASIUS.—Apollodorus, one of the earliest of Athenian painters, said of Zeuxis, "That he had stolen the cunning from all the rest." Zeuxis himself made no difficulty of boasting of his pre-eminence. He painted a wrestler or champion so much to his own mind, that he wrote below it, "Invisurus aliquis facilius quam imitaturus"—"Sooner envied than equalled." Parrhasius of Ephesus had the boldness to challenge Zeuxis to a trial of skill. Zeuxis brought forth a tablet, on which clusters of grapes were represented in so freely a manner, that the birds of the air came flocking to partake of them. Parrhasius on his part, brought a tablet, on which he had painted nothing but a curtain, but so like reality, that Zeuxis, in exultation that the birds had given such proof of the power of his pencil, exclaimed, "Come, Sir, away with your curtain, that we may see what goodly affair you have got beneath it." On being shewn his error, he felt much abashed, and yielding the victory, said, "Zeuxis beguiled poor birds, but Parrhasius hath deceived Zeuxis."

A bed of variegated marble has been discovered whilst working a limestone quarry, belonging to George Pybus, Esq., of Middleton Tyas, near Richmond. A small part has been dressed by a skilful workman; the polish is beautiful, and the marble is likely to be brought into [illegible]

CHINESE TOOLS AND CHINESE MECHANICS.—Though their iron-work is not good, yet their tools, such as chisels, planes, saws, &c., are excellent, and kept very sharp. They make use of the circular instead of the hand-saw. They have a saw for particularly fine work, which, if we had not seen them using, we should have imagined that the work had been done with a chisel. The blade of it consists merely of a single piece of brass wire jagged with a sharp instrument. The pattern to be carved is traced on the wood, and a hole is bored in it, through which the wire is passed and made fast to the handle, which is kept outside the wood; the carving is then cut with the greatest care and accuracy. For all rough work, they make use of a small sort of axe, slightly rounded on one side. This answers the purpose of an adze. In peaceful times, the streets of a Chinese city must present a very fine appearance, from the way the front signboards are painted and gilded. The insides of the shops are protected from the sun by screens extending across the streets, supported from the roof of the house. These are either of matting, or, in order to admit the light, are made of oyster-shells, scraped fine, set in frames like panes of glass.—*Murray's Doings in China.*

ALCOHOL.—An experiment has been made, at the theatre of Montpelier, of a new principle of lighting —from alcohol—said to be successful, and important to the wine-growing districts of France, as a fresh vent for their produce. The light is stated to be of dazzling brightness, and without either odour or smoke.

ALLAN CUNNINGHAM.—Chantry had caused a splendid vault to be built for himself, and, with much kindness, proposed to Allan Cunningham that he also should be buried in it. "No, no," answered Allan, "I'll not be built over when I'm dead; I'll lie where the wind shall blow over, and the daisy grow upon my grave."

The bust of the Duke of Newcastle, executed by Mr. Behnes, at the expense of the members of the College, is about to be put up in the Library at Eton. This is the fifth lately contributed—Lord North, presented by Lord Guilford; Charles Fox, by Lord Holland; Lord Grenville, by the Duke of Buckingham; and the Marquis Wellesley, by himself.

MATRIMONIAL MARKET AND COURTING INTELLIGENCE.—But little business has been doing since our last, and terms may be considered a trifle easier; for really good and useful descriptions there has been some demand, which demand, though far from great, has exceeded the supply, so that these cannot be quoted at lower prices. Ready-furnished houses, with or without small annuities, have been freely offered, and in some instances accepted; but cash terms seem generally preferred, as it prevents many mistakes and much disappointment. Papas, bachelor uncles, and maiden aunts, not always cutting up as expected. In ordinary descriptions there is nothing doing, and prices nominal. All are eagerly looking forward to the results of the Christmas flirtations, when, unless things assume a livelier appearance, thousands of our fellow-creatures will have to sigh away their lives in perpetual celibacy. In the Foreign Markets, although things are dull at present, owing to the Colonial Market being overdone, and the Australian in bad repute, yet it is confidently expected that a reaction will shortly take place. In consequence of our late successes in the East. Chinamen (to whom Providence allows two, a privilege of which they seldom avail themselves) will no doubt gladly avail themselves of our superfluity; whilst Afghanistan offers an unlimited market, numbers being no object—provided the ladies are approved of. There has been a proposal for exploring the Polar regions.—*Punch.*

AN IRISH BULL AT NEW YORK.—About a mile up Broadway is the Park. This is a small enclosure of a few acres, encircled with an iron railway, divided into walks, planted with trees, furnished with seats, and made every way as agreeable as it is possible to make a small oasis of verdure, situated in the centre of a populous city. At the upper end of the Park stands the pride of New York—the City Hall. It is a fine marble structure certainly, but it did not strike me as possessing that magnificent appearance that I expected from a building composed entirely of marble. But tastes differ. One of our company on this occasion, related an anecdote of an Irish gentleman, whom he had conducted round the city. After surveying several of the public buildings, and many streets presenting architectural attractions, all of which the Irishman had dismissed in succession with this remark,—"Very good, indeed, but not like Dublin," he was suddenly brought within full view of the City Hall. The Hibernian appeared struck with astonishment, and unguardedly exclaimed, "But was this built here?"—*Mrs. Felton's American Life.*

"What," inquired the schoolmaster, "what is the plural of penny?" "Twopence!" shouted the observant lad in the class.

Architectural Competition.

Under this head we shall give notices of pending competitions, and shall feel obliged by our friends forwarding us the accounts of what may fall in their way of this character. We shall also be happy to give engravings of the selected designs; and think that, by such publicity, the present very defective system of decision may be amended. Publicity is sometimes a remedy when more direct measures have failed.

KINGSTON UNION.—DESIGNS FOR AN INFIRMARY.—To be sent in by the 6th March.

NEW CHURCH, TORQUAY.—11th March.

ALMSHOUSES, SPALDING.—6th March.

ALMSHOUSES, RINGWOOD.—1st March.

COUNTY ASYLUM, OXFORD.—10th March.

NOTICES OF CONTRACTS.

The following contracts are advertised in different papers, and we have kept a register of the particulars of each at the office, which may be referred to on application. In the continuation of this plan, which we flatter ourselves will be of service to our readers, material assistance will be rendered by the forwarding of papers from our country friends, or by any other means of notification of which they may choose to avail themselves.

NEW CHURCH AT HILDENBOROUGH, NEAR TONBRIDGE, KENT.—Tenders to be sent on the 2nd of March. Mr. Ewan Christian, Bloomsbury Square, Architect.

RAILWAY STATION BUILDINGS, AND OTHER MASONRY, &c., HUNT'S BANK, MANCHESTER.—Plans open from the 13th February; tenders to be sent in on the 6th of March. Mr. Gooch, Oldham Road, Manchester.

Also, FORMATION AND COMPLETION OF THE BRANCH RAILWAY TO HALIFAX, 1 mile and 55 chains.—The same time and parties.

REPAIRING THE PAINTED GLASS OF THE EAST WINDOW IN LEIGH CHURCH, ESSEX.—Rev. R. Edge, Leigh Rectory, Rochford.

REPAIRING SEVERAL STREETS OF ST. PANCRAS.—7th of March.—Mr. Tattersall, 42, Pall Mall.

FOR FINISHING A NUMBER OF HOUSES.—Z. Y., 122, Mount-street, Berkeley-square.

BUILDING A NEW SEWER IN CHANCERY LANE.—March 10th.—Sewers' Office, Hatton-garden.

The terms of subscription to THE BUILDER *are as follows:*

UNSTAMPED EDITION.

Quarterly	3s. 3d.
Half-Yearly	6 6
Yearly	13 0

STAMPED EDITION.

Quarterly	4 4
Half yearly	8 8
Yearly	17 4

Part I., stitched in a wrapper, will be ready for delivery at the end of each month, price 1*s.*

THE BUILDER *can be supplied from the Office, York-street, Covent Garden, on the remittance of a post-office order in advance.*

The charge for Advertisements will be as under:

Seven lines	5*s.* 0*d.*
Every additional line	0 4
To workmen advertising for situations, the price will be reduced to	3 6

Advertisements for THE BUILDER *must be forwarded to the Office before Wednesday in each week.*

NOTICES.

TO OUR CORRESPONDENTS.

Our subscribers will observe we have arranged our advertisements in such a form as to serve as the purpose of a wrapper, keeping the contents clean. The folios of the pages will follow on in succession from number to number, omitting altogether the advertisements, by cutting off which, the work will then be complete, and ready for the hands of the binder.

It is requested that where there has been any irregularity in the transmission of THE BUILDER, *notice will be forwarded immediately to the office.*

We beg again to impress on our friends that they may render us much service, and to contribute to the general interest, by forwarding us country papers which contain paragraphs or advertisements relating to Architecture, Engineering, and Building Science.

We are obliged to postpone a solution that has been sent us of the problem given in our last; and here we will take occasion to remark of the diagram and proportions that they were not sufficiently clear. It should have been stated and shewn that the figure was a square, with a smaller square on half the side of the larger one.

Mr. Hunter's communication came to hand, for which we thank him, and through him his six co-subscribers.

We [illegible] also, and for his subscription.

To learn how to Remove this and this Message, Purchase this Document at http://www.ThePaperArchive.com